JPRS L/9936

25 August 1981

USSR Report

ELECTRONICS AND ELECTRICAL ENGINEERING

(FOUO 9/81)

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APPROVED FOR RELEASE: 2007/02/09: CIA-RDP82-00850R000400040048-1

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USSR REPORT

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PUBLICATIONS

COLLECTION STUDIES MICROWAVE ENGINEERING, DEVICES, TRANSMISSION LINES

Khar'kov RADIOTEKHNIKA: RESPUBLIKANSKIY MEZHVEDOMSTVENNYY NAUCHNO-TEKHNICHESKIY SBORNIK in Russian No 51, 1979 (signed to press 22 Nov 79) pp 2-4

[Annotation and table of contents from collection of papers "Radio Engineering: Republic Interdepartmental Scientific and Technical Collection", No 51, Izdatel'stvo pri Khar'kovskom gosudarstvennom universitete izdatel'skogo ob"yedineniya "Vyshcha shkola", 1000 copies, 145 pages]

[Text] In this collection are presented the results of theoretical and experimental research in the area of microwave engineering and devices. Microwave transmission lines, units and elements of microwave equipment, measuring instruments for the microwave band, as well as questions relating to the theory and design of electronic devices of the magnetron type and of semiconductor microwave devices, are discussed.

For scientific personnel and specialists in the radio electronics field.

Bibliographies are found at the ends of articles.

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COLLECTION STUDIES MICROWAVE RADIO MEASUREMENTS, EQUIPMENT

Khar'kov RADIOTEKHNIKA: RESPUBLIKANSKIY MEZHVEDOMSTVENNYY NAUCHNO-TEKHNICHESKIY SBORNIK in Russian No 49, 1979 (signed to press 20 Jun 79) pp 2, 131

[Annotation and table of contents from collection of papers "Radio Engineering: Republic Interdepartmental Scientific and Technical Collection", No 49, Izdatel'stvo pri Khar'kovskom gosudarstvennom universitete izdatel'skogo ob"yedineniya "Vyshcha shkola", 1000 copies, 137 pages]

[Text] This collection is devoted to theoretical and experimental research in the area of microwave electrodynamics and engineering, radio measurements in the microwave band, as well as the electronics of microwave oscillators and amplifiers.

For scientific personnel and specialists in the field of radio engineering and radio physics.

Bibliographies are found at the ends of articles.

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COLLECTION STUDIES RADIO SIGNAL FORMATION, METEORIC COMMUNICATIONS CHANNEL TRANSMISSION OF DATA, CIRCUIT ANALYSIS, SYNTHESIS

Khar'kov RADIOTEKHNIKA: RESPUBLIKANSKIY MEZHVEDOMSTVENNYY NAUCHNO-TEKHNICHESKIY SBORNIK in Russian No 50, 1979 (signed to press date not available) pp 2, 133-134

[Annotation and table of contents from collection of papers "Radio Engineering: Republic Interdepartmental Scientific and Technical Collection", No 50, Izdatel'stvo pri Khar'kovskom gosudarstvennom universitete izdatel'skogo ob"yedineniya "Vyshcha shkola", number of copies not available, 141 pages]

[Text] This collection is devoted to the analysis and synthesis of radio engineering circuits and to questions relating to coding information and transmitting it through a meteoric communications channel. The results of theoretical and experimental studies in the area of the formation of radio signals are discussed.

For scientific personnel and specialists in radio engineering, as well as for upper-class students in radio engineering departments.

Bibliographies are found at the ends of articles.

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UDC 681.846.7

MAGNETIC RECORDING OF SIGNALS

Moscow MAGNITNAYA ZAPIS' SIGNALOV in Russian 1981 (signed to press 19 Dec 80) pp 2-3, 161

[Annotation, foreword (excerpts) and table of contents from book "Magnetic Recording of Signals", by Maksim Vladimirovich Gitlits, Izdatel'stvo "Radio i svyaz'", 30,000 copies, 161 pages]

[Text] The author gives a systematic description of the physical principles of magnetic recording, characteristics of the recording-reproduction track, describes methods of sound recording, video recording, fidelity recording, as well as methods for calculating the characteristics and assemblies of magnetic recorders.

This book is intended for students of higher educational institutions of communications specializing in radio communications and radio broadcasting.

Foreword

Magnetic recording is still the most widespread method of data recording. It is used for professional and household sound and video recording, and for recording communication and control signals and results of computations (magnetic fidelity recording). Magnetic recorders (AMZ) are used in the studios of radio and television centers, on spacecraft, and in scientific laboratories, concert halls, and archives. They are used in telemetric systems, data transmission systems, and other large radio technical complexes. Magnetic recording is used in the storage devices of modern electronic computers. High-quality sound and television broadcasting is impossible without magnetic tape recorders and video recorders.

Therefore, every radio engineer must be able to operate AMZ properly and design intelligently such equipment.

This book is a textbook for students of electrotechnical institutes of communications. Problems of magnetic recording are studied in communications institutes in courses on television, radio broadcasting, as well as in a special course of "Magnetic Recording". This textbook was compiled in accordance with the program of this course, as well as in accordance with the content of sections dealing with magnetic recording in courses of television and radio broadcasting.

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MAINTENANCE OF DATA TRANSMISSION SYSTEMS

Moscow EKSPLUATATSIYA SISTEM PEREDACHI DANNYKH in Russian 1980 (signed to press 19 Jun 80) pp 2, 182-183

[Annotation and table of contents from book "Maintenance of Data Transmission Systems", by Igor' Dmitriyevich Arkad'yev, Leonid Isaakovich Zubovskiy and Boris Fedorovich Shcherbakov, Izdatel'stvo "Svyaz'", 6000 copies, 184 pages]

[Text] The fundamentals of the organization and maintenance of data transmission systems are discussed, modern methods of checking the technical condition of data transmission systems and their key elements are described, and the requirements for the characteristics of communications channels and power supply systems are determined. Special attention is paid to questions relating to the organization and performance of preventive maintenance and routine repair of data transmission systems.

Intended for engineering and technical personnel who maintain equipment and communications channels used for data transmission.

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SURFACE ACOUSTIC WAVES, TROPOSPHERIC REFRACTION

Khar'kov RADIOTEKHNIKA: RESPUBLIKANSKIY MEZHVEDOMSTVENNYY NAUCHNO-TEKHNICHESKIY SBORNIK in Russian No 52, 1980 (signed to press 30 Jan 80) pp 2, 138-139

[Annotation and table of contents from collection of papers "Radio Engineering: Republic Interdepartmental Scientific and Technical Collection", No 52, Izdatel'stvo pri Khar'kovskom gosudarstvennom universitete izdatel'skogo ob"yedineniya "Vyshcha shkola", 1000 copies, 145 pages]

[Text] In this collection are discussed the properties of modulated signals, their spectral composition, the construction of lines using surface acoustic waves for delaying signals, and the possibilities of their effective processing. A number of articles are devoted to direct study of tropospheric refraction and to the employment of the acoustical method for a remote determination of parameters of the atmosphere.

For scientific personnel and specialists in the field of radio engineering.

Bibliographies are found at the end of articles.

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FORMATION, SYNTHESIS, ANALYSIS OF RADIO SIGNALS

Khar'kov RADIOTEKHNIKA: RESPUBLIKANSKIY MEZHVEDOMSTVENNYY NAUCHNO-TEKHNICHESKIY SBORNIK in Russian No 55, 1980 (signed to press 19 Sep 80) pp i, 2

[Annotation and table of contents from collection of papers "Radio Engineering: Republic Interdepartmental Scientific and Technical Collection", No 55, Izdatel'stvo pri Khar'kovskom gosudarstvennom universitete izdatel'skogo ob"yedineniya "Vyshcha shkola", 1000 copies, 113 pages]

[Text] This collection is devoted to theoretical and experimental research in the area of the formation, synthesis and analysis of radio signals and to questions relating to the development of radio engineering circuits and equipment.

For scientific personnel and specialists.

Bibliographies are found at the ends of articles.

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RECEPTION, DIGITAL PROCESSING, ANALYSIS OF RADIO SIGNALS

Khar'kov RADIOTEKHNIKA: RESPUBLIKANSKIY MEZHVEDOMSTVENNYY NAUCHNO-TEKHNICHESKIY SBORNIK in Russian No 54, 1980 (signed to press 1 Apr 80) pp i, 2

[Annotation and table of contents from collection of papers "Radio Engineering: Republic Interdepartmental Scientific and Technical Collection", No 54, Izdatel'stvo pri Khar'kovskom gosudarstvennom universitete izdatel'skogo ob"yedineniya "Vyshcha shkola", 1000 copies, 145 pages]

[Text] In this collection are discussed the results of theoretical research on and practical implementation of systems for receiving and estimating the parameters of radio signals with their digital processing.

For scientific personnel and specialists in the field of radio engineering and radio physics.

Bibliographies are found at the ends of articles.

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UDC 658.284.001 (03)

PRODUCTION COMMUNICATIONS DESIGNER'S HANDBOOK

Moscow SPRAVOCHNIK PROYEKTIROVSHCHIKA PROIZVODSTVENNOY SVYAZI in Russian 1981 (signed to press 12 Nov 80) pp 2, 216

[Annotation and table of contents from book "Production Communications Designer's Handbook", by Oleg Nikolayevich Nesterov, Petr Kirillovich Sviridyuk, and Lev Natanovich Yakhnis, Izdatel'stvo "Radio i svyaz'", 25,000 copies, 216 pages]

[Text] This book examines the problems of the development of production communications systems in various stages of designing. Information is given on production communications equipment, equipment of data transmission systems, electric power supply, cables, wires, as well as on external plants. Recommendations are given for coordinating production communications networks with the YeASS [Unified Automated Network of the Soviet Union], ASU [automatic control systems], and on the preparation of required specifications.

The book is intended for designers and other specialists engaged in the problems of production communications.

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USES OF PRECISION ANALOG INTEGRATED CIRCUITS

Moscow PRIMENENIYE PRETSIZIONNYKH ANALOGOVYKH IS in Russian 1981 (signed to press 20 Nov 80) pp 2, 222-223

[Annotation and table of contents from book "Uses of Precision Analog Integrated Circuits", by Andrey Gennad'yevich Aleksenko, Yevgeniy Aleksandrovich Kolombet, and Georgiy Ivanovich Starodub, Izdatel'stvo "Radio i svyaz'", 60,000 copies, 224 pages]

[Text] This book treats theoretical and practical aspects of the application of precision analog integrated circuits: operational amplifiers, comparators and voltage multipliers which are the main analog elements of modern microelectronic equipment. Methods of improving the basic parameters and characteristics of these elements in solving nontraditional equipment problems are presented in detail.

The circuits using operational amplifiers, comparators and multipliers described in this book cover large areas of their application: performance of mathematical operations, shaping, conversion, discretization of signals, etc. Attention is given to designing supply sources, monophonic and stereophonic systems.

This book is intended for engineers specializing in the applications of integrated microcircuits. It will be useful to radioengineering students.

Figures -- 200, tables -- 40, bibliography -- 181 items.

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